AMENDMENTS TO THE CLAIMS

Claims 1-104 (cancelled)

105. (new) A transfer film for laser micro-capture of a sample comprising: at least one expansion layer, and

an adhesive layer coupled to the expansion layer; the adhesive layer being located between the expansion layer and the sample for microdissection; the expansion layer being adapted to absorb energy incident upon the transfer film and to expand to exert a force upon the adhesive layer such that a selected portion of the sample adheres to the adhesive layer for micro-capture.

106. (new) The transfer film of claim 105, wherein the adhesive layer includes at least one pressure sensitive adhesive.

107. (new) The transfer film of claim 105, wherein at least one of the layers includes a polymer selected from the group consisting of thermosets, thermoplastics, and elastomers.

108. (new) The transfer film of claim 105, wherein the expansion layer is thermally coupled to at least one energy absorbing substance.

109. (new) The transfer film of claim 105, wherein at least one energy absorbing substance is thermally coupled to the expansion layer, and at least one energy absorbing substance is thermally coupled to the adhesive layer and the at least one energy absorbing substance coupled to the expansion layer is addressable independently from the at least one energy absorbing substance coupled to the adhesive layer.

110. (new) The transfer film of claim 108, wherein the expansion layer is doped with at least one energy absorbing substance and the adhesive layer is not doped.

111. (new) The transfer film of claim 109, wherein the at least one energy absorbing substance that is coupled to the expansion layer is addressable independently from the at least one energy absorbing substance coupled to the adhesive layer such that activation of the expansion layer provides a first expansion towards the sample having at least a first distance and activation of the adhesive layer provides a second expansion towards the sample having at least a second distance.

112. (new) The transfer film according to claims 108 or 109, wherein the at least one energy absorbing substance is selected from the group consisting of energy absorbing dyes, metal films, polymer nano-composites, and Buckminsterfullerene.

113. (new) The transfer film according to claims 108 or 109, wherein the energy absorbing substance forms at least one concentration gradient.

114. (new) The transfer film of claim 105, wherein the transfer film is adapted to retract away from the sample.

115. (new) The transfer film of claim 114, wherein the transfer film comprises a retraction layer.

116. (new) The transfer film of claim 115, wherein at least one of the layers includes a polymer selected from the group consisting of thermosets, thermoplastics, and elastomers.

117. (new) The transfer film of claim 115, wherein the retraction layer is coupled to at least one energy absorbing substance.

118. (new) The transfer film of claim 117, wherein the energy absorbing substance coupled to the retraction layer is independently addressable.

119. (new) A method for laser micro-capture comprising: providing a sample,

placing the sample in the optical path of an optical system,

placing a transfer film within the optical path of the system; the transfer film comprising at least one energy absorbing substance and, at least one expansion layer and at least one adhesive layer; the adhesive layer being located between the expansion layer and the sample selecting a portion of the sample for micro-capture; exposing the at least one energy absorbing substance to energy capable of activating the transfer film resulting in expansion of the expansion layer to exert a force upon the adhesive layer such that a selected portion of the sample adheres to the adhesive layer for micro-capture.

120. (new) The method of claim 119, wherein the transfer film retracts subsequent to adhesion of the adhesive layer to the sample.

121. (new) The method of claim 119, wherein the step of exposing the at least one energy absorbing substance to energy includes exposing with more than one pulse of energy for independently addressing more than one energy absorbing substance.